



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,760	04/09/2004	Jyh-Shin Pan	3722-0188PUS1	8827
2292	7590	12/10/2007	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH			LAMB, CHRISTOPHER RAY	
PO BOX 747			ART UNIT	PAPER NUMBER
FALLS CHURCH, VA 22040-0747			2627	
			NOTIFICATION DATE	DELIVERY MODE
			12/10/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/820,760

Applicant(s)

PAN ET AL.

Examiner

Christopher R. Lamb

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-18,21-23 and 25-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 3-17 is/are allowed.
- 6) ☒ Claim(s) 18,21-23,25-29 and 33 is/are rejected:
- 7) ☒ Claim(s) 30-32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/31/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 31st, 2007 has been entered.

Claim Objections

2. Claim 18 is objected to because of the following informalities:

In line 11, the phrase "continues to enable" is confusing. A phrase such as "re-enables" would be clearer.

Also, there are minor grammatical errors. For example:

In lines 18-19, "after special pattern" should be "after the special pattern."

In line 19, "being disabled" should be "is disabled."

In line 20, "an subtractor" should be "a subtractor."

In lines 25-26, "between the recording enable signal is enabled" should be "between when the recording enable signal is enabled."

Appropriate correction is required.

Response to Arguments

3. Applicant's arguments with respect to claims 18, 21-23, 25-29, and 33 have been considered but are moot in view of the new ground(s) of rejection.

The Examiner had previously indicated the subject matter of claim 18 as allowable. This indicated allowability is withdrawn in view of the new grounds or rejection that follows.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 18, 21-23, 25-29, and 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa (US 2003/007229) in view of Pan (US 2002/0048240).

Regarding claim 18:

Hasegawa discloses:

A recording drive for controlling a recording operation of recording a recording data on an optical storage medium so as to locate a starting position of a succeeding recording operation after a condition of interruption occurs to interrupt the recording operation (embodiment 4, paragraphs 98-101, is relied upon), the recording drive comprising:

a recording interruption generating module for enabling a recording interruption enable signal when the condition of interruption occurs (paragraph 100);

a data recording module for generating a recording enable signal to control a recording laser so as to record the recording data on the optical storage medium, wherein the data recording module records a special pattern on the optical storage

medium, outputs a special pattern information corresponding to the special pattern, and disables the recording enable signal after the recording interruption enable signal is enabled, and continues to enable the recording enable signal according to a special pattern detection signal (paragraph 100: the special pattern is the subcode sync); and

a special pattern detection module for receiving the special pattern information and a recorded data signal obtained from the optical storage medium to detect the special pattern, and enabling the special pattern detection signal when the recorded data signal is detected to be similar to or the same as a portion of the special pattern (paragraph 79);

wherein the data recording module further comprises:

a rest length calculating unit for calculating a rest length of the recording data after the special pattern and before the recording enable signal being disabled (paragraph 100: the recording can be stopped a predetermined number of clock cycles after the sub code sync); and

a delay enabling unit for receiving the special pattern detection signal and enabling the recording enable signal with a delay of the recording delay length after the special pattern detection signal is enabled (paragraph 100).

Hasegawa does not disclose:

“a subtractor for receiving the rest length and a compensation value and subtracting the compensation value from the rest length to generate a recording delay length;;

wherein the compensation value is determined according to the time between the recording enable signal is enabled and the recording laser starts to record the recording data. “

Pan discloses that the recording start position must be advanced by a compensation value (the laser power settling time) to avoid data grabbing error (paragraph 61).

It would have been obvious to one of ordinary skill in the art to advance the recording start position in Hasegawa by a compensation value, as taught by Pan (in other words, the recording should be enabled slightly earlier to account for the laser power settling time).

To implement this would require a subtractor for receiving the rest length and a compensation value and subtracting the compensation value from the rest length to generate a recording delay length; wherein the compensation value is determined according to the time between the recording enable signal is enabled and the recording laser starts to record the recording data (it is the laser power settling time, as taught by Pan).

The motivation would have been to avoid data grabbing error, as taught by Pan.

Regarding claim 21:

In Hasegawa in view of Pan the special pattern is a data pattern that does not appear in the recording data (the subcode sync is not part of the recording data).

Regarding claim 22:

In Hasegawa in view of Pan the special pattern is a data pattern that can be detected as being different from a normal format of the recording data (the subcode sync is distinguishable from the normal recording data).

Regarding claim 23:

In Hasegawa in view of Pan the special pattern comprises a data pattern having a length of continuously identical signal status greater than the maximum length of continuously identical signal status of the recording data (Hasegawa's method is for use with CDs: in the CD standard the subcode syncs are longer than the maximum run length of normal data).

Regarding claims 25 and 26:

These claims are dependent on claim 33 and will be addressed after that claim (see below).

Regarding claim 27:

In Hasegawa in view of Pan the data recording module further comprises:
a data position addressing unit for providing a data position of the recording data from detecting an address information of the recording data, and for providing a data position of the recorded data signal from detecting an address information of the recorded data signal; and a register for storing the data position of the recording data corresponding to where the special pattern is recorded, as a special pattern data position (paragraph 79).

Regarding claim 28:

Hasegawa in view of Pan discloses:

the data recording module further comprises a special pattern search control unit for subtracting a predetermined value from the special pattern data position to obtain a special pattern searching data position, and for starting to search for the special pattern according to the data position of the recorded data signal and the special pattern searching data position (Hasegawa paragraph 75: it starts from the address of the block previous to the last block, and therefore is at a distance of a predetermined value from the sub-code of the last block; and is searches as per paragraph 79).

Regarding claim 29:

In Hasegawa in view of Pan the special pattern search control unit stops the searching for the special pattern after searching for the special pattern within a predetermined range (this is not explicitly disclosed, but inherent for two reasons. First, it starts the search at the previous block, so it expects to find it one block later; also, the "predetermined range" could be construed as the length of the disc, and Hasegawa in view of Pan would have to stop searching for the subcode in that length).

Regarding claim 33:

Hasegawa in view of Pan discloses:

a physical address addressing unit for providing a physical address of the optical storage medium from detecting an address information prerecorded on the optical storage medium (Hasegawa paragraph 57).

Hasegawa in view of Pan does not disclose:

a register for storing the physical address of the optical storage medium corresponding to where the special pattern is recorded, as a special pattern physical address.

Hasegawa discloses storing an address (as per paragraphs 75-79, but it is not the physical address).

Pan discloses a register for storing the physical address of the optical storage medium corresponding to the linking area (paragraphs 48-49). In Hasegawa, the linking area is the area where the special pattern is recorded.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include in Hasegawa in view of Pan a register for storing the physical address of the optical storage medium corresponding to where the special pattern is recorded, as a special pattern physical address.

The motivation would have been to precisely locate the linking area (Pan paragraph 48).

Regarding claim 25:

In Hasegawa in view of Pan the data recording module further comprises a special pattern search control unit for subtracting a predetermined value from the special pattern physical address to obtain a special pattern searching physical address, and for starting to search for the special pattern according to the physical address of the optical storage medium and the special pattern searching physical address (this follows directly from Hasegawa in view of Pan as used to reject claim 33: typically Hasegawa obtains a special pattern searching address as per Hasegawa paragraph 75, when the

physical address is used as in the rejection of claim 33 this becomes a special pattern searching physical address).

Regarding claim 26:

In Hasegawa in view of Pan the special pattern search control unit stops the searching for the special pattern after searching for the special pattern with a predetermined range (as per claim 29 above, if the "predetermined range" is considered to be the length of the disc, it has to stop searching within that range).

Allowable Subject Matter

6. Claims 1 and 3-17 are allowed.
7. Claims 30-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1:

The reasons were given in a previous Office Action. To sum up, the closest prior art of record does not disclose wherein the step of recording the special pattern on the optical storage medium comprises a step of replacing a portion of recording data with the special pattern. This limitation in combination with the other limitations of the claim renders it allowable over the prior art of record.

Regarding claims 3-17:

They are dependent on claim 1.

Regarding claim 30:

Since in the closest prior art of record, Hasegawa in view of Pan, the special pattern is the frame sync, the prior art of record does not disclose calculating a distance between the special pattern and a frame sync pattern of the recording data that is adjacent to the special pattern, and storing the distance as a special pattern frame sync distance. This limitation in combination with the other limitations of the claim renders it allowable over the prior art of record.

Regarding claims 31 and 32:

They are dependent on claim 30.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (571) 272-5264. The examiner can normally be reached on 9:00 AM to 6:30 PM Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CRL 11/29/07

/William Korzuch/
SPE, Art Unit 2627